

configured to have a slot extending in the main scanning direction , a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including not entirety but part of the plurality of dot-forming elements; the computer program product comprising:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program comprising:

an image data generating program for causing the computer to generate image data for an area outside the print medium beyond the edge on which the edge printing is performed.

REMARKS

Claims 1-40 are pending in the application. Claims 1, 2, 19, 33, and 34 have been amended. Favorable reconsideration of the application, as amended, is respectfully requested.

I. ALLOWABLE SUBJECT MATTER

Applicant acknowledges with appreciation the indicated allowability of claims 12, 16-18, 28, 29, 31, 32, 37, 38, and 40 subject to being rewritten in independent form. For at least the reasons set forth below, it is respectfully submitted that other pending claims are also in condition for allowance.

II. OBJECTIONS OF CLAIMS 1 AND 2

Claims 1 and 2 stand objected to due to typographical errors. These claims have been amended to address the Examiner's concerns. Applicant believes these amendments are sufficient to overcome the objections. Also, a typographical error in claim 33 has been corrected. Withdrawal of the objections is respectfully requested.

III. REJECTIONS OF CLAIMS 1, 2, 4-6, 8, 9, 19, 20, 22, 23, 25, and 33-36 UNDER 35 U.S.C. § 102(e)

Claims 1, 2, 4-6, 8, 9, 19, 20, 22, 23, 25, and 33-36 stand rejected under 35 U.S.C. § 102(e) as being obvious by U.S. Patent No. 6,239,817 (“Meyer”). Withdrawal of the rejections is respectfully requested for at least the following reasons.

The invention defined in independent claims 1, 19, 33, and 34 relates to a method, an apparatus, and a computer program product for recording ink dots. Independent claims 1, 19, 33, and 34 have been amended to further clarify one of the features of the present invention. Specifically, these claims require that “a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head includ[e] not entirety but part of the plurality of dot-forming elements.”

In a specific embodiment of the invention shown in, for example, Fig. 1, the “width of the slot (26f and 26r) in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head” corresponds to an area covering the nozzles #1 and #2, and an area covering the nozzles #7 and #8. This “width of the slot” does not include entirety of the plurality of dot-forming elements (the nozzles #1-#8), but only a part of the plurality of dot-forming elements. That is, in this specific embodiment, the “width of the slot” covers only a part of the nozzles #1-#8, i.e., the nozzles #3-#6 as shown in Fig. 1. Such claimed feature may be advantageous in some specific embodiments because a portion of the paper P above the platen 26 can be printed by an increased number of the nozzles, which are not above the slots 26f and 26r. Note that this exemplary clarification referring to a specific embodiment should not be construed as a limitation which is read into the pending claims to narrow the scope of the claims.

Meyer describes a borderless inkjet printer including a hollow open end platen having a block of ink absorbent material. As shown in FIGS. 4A-4C, and 7, the hallowed out support area 38 containing the ink absorbent material 40 completely covers the head cartridges 26-27, i.e., all nozzles provided on the print head 27 with respect to the paper path PP. Meyer, column 4, lines 7-16. Therefore, Meyer fails to teach or suggest that the “width of the slot” does not include entirety of the plurality of dot-forming elements, but only a part of the plurality of dot-forming elements as recited in independent claims 1, 19, 33, and 34. Rather, Meyer merely shows a printer in which the width of the slot completely includes entirety of the plurality of dot-forming elements. Thus, Meyer cannot be said to anticipate the above-identified claimed feature.

At least for the reasons set forth above, the inventions defined in independent claims 1, 19, 33, and 34, and their dependent claims are believed to be patentable over Meyer. Withdrawal of the rejection is respectfully requested.

IV. REJECTIONS OF CLAIMS 1-11, 13-15, 19-27, 30, 33-36, AND 39 UNDER 35 U.S.C. § 102(e)

Claims 1-11, 13-15, 19-27, 30, 33-36, and 39 stand rejected under 35 U.S.C. § 102(e) as being obvious by EP 1043166A2 ("Kodama"). Applicant submits translation of the priority documents with certifications of translation herewith.

The filing date of the corresponding Japanese applications (i.e., JP2000-294172(P), JP2000-294074(P), and JP2000-294142(P)) from which the present application claims the priority is September 27, 2000. This filing date of the Japanese applications antedate the publication date of Kodama, which is October 11, 2000. Thus, Kodama cannot be a prior art under § 102(a). Since Kodama is not an application filed in the U.S. or an international application filed under the treaty defined in 35 U.S.C. § 351(a), Kodama also does not constitute a § 102(e)(1) or (e)(2) reference. Withdrawal of the rejections is respectfully requested.

V. CONCLUSION

Applicant believes that all pending claims are in condition for allowance, and respectfully requests a Notice of Allowance at an early date. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 510-843-6200.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP



Haruo Yawata
Limited Recognition under 37 CFR §10.9(b)

P.O. Box 778
Berkeley, CA 94704-0778
Tel: 510-843-6200

APPENDIX -- VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1, 2, 19, 33, and 34 have amended as follows:

1. (Amended) A dot-recording device for recording ink dots on a surface of a print medium with the aid of a dot-recording head provided with a plurality of dot-forming elements for ejecting ink droplets, the dot-recording device comprising:

a main scanning unit configured to drive the dot-recording head and/or the print medium to perform main scanning;

a head driver configured to drive at least some of the dot-forming elements to form dots during the main scanning;

a platen configured to extend in the main scanning direction and to be disposed opposite the dot-forming elements at least along part of a main scan path, and the platen being configured to support the print medium at a position opposite the dot-recording head;

a sub-scanning unit configured to move the print medium to perform sub-scanning [sub-scanning] in between the main scans; and

a controller configured to control the dot recording device, wherein the platen has a slot extending in the main scanning direction , a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including [at least] not entirety but part of the plurality of dot-forming elements.

2. (Amended) A dot-recording device as defined in Claim 1, wherein the specific sub-scanning range includes at least one of two end ranges in the sub-scanning at opposite ends of the dot-recording head, each end range including at least one dot-forming element, and wherein the controller has:

(a) a first recording mode to effect printing near an edge of the printing medium, in the first recording mode the controller performing edge printing by ejecting ink droplets from at least some of the dot-forming elements disposed opposite the slot when the print medium is supported on the platen, and the edge of the print medium is disposed above the slot, and

(b) a second recording mode to effect printing in an intermediate portion of the print medium, a maximum sub-scan feed amount in the second recording mode being greater than a maximum [sun-scan] sub-scan feed amount in the first recording mode.

19. (Amended) A dot-recording method using a dot-recording device for recording ink dots on a surface of a print medium, dot recording device including a dot-recording head having a plurality of dot-forming elements for ejecting ink droplets, the method comprising the steps of:

(A) providing a platen configured to extend in the main scanning direction and to be disposed opposite the dot-forming elements at least along part of a main scan path, the platen being configured to support the print medium at a position opposite the dot-recording head, and that has a slot extending in a main scanning direction, a width of the slot in a sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including [at least] not entirety but part of the plurality of dot-forming elements, and

(B) printing images along the edges whereby ink droplets are ejected from at least some of the dot-forming elements disposed at positions opposite the slot when a front or rear edge of the print medium is disposed above the slot opening, and dots are formed on the print medium.

33. (Amended) A print control device for generating print data to be sent to a dot-recording unit that records ink dots on a surface of a print medium, the dot recording unit including a dot-recording head having a plurality of dot-forming elements for ejecting ink droplets, the dot-recording unit comprising a main scanning unit configured to drive the dot-recording head and/or the print medium to perform main scanning; a head driver configured to drive at least some of the dot-forming elements to form dots during the main scanning; a platen configured to extend in the main scanning direction and to be disposed opposite the dot-forming elements at least along part of a main scan path, and the platen being configured to support the print medium at a position opposite the dot-recording head; a sub-scanning unit configured to move the print medium to perform sub-scanning sub-scanning in between the main scans; and a controller configured to control the print control device, the platen comprises a slot extending in the main scanning direction, a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including [at least] not entirety but part of the plurality of dot-forming elements, the print control device comprising:

an image data generator for generating image [datafor] data for an area outside the print medium beyond the edge on which the edge printing is performed.

34. (Amended) A computer program product for recording ink dots on a surface of a print medium using a computer, the computer equipped with a dot-recording device for recording ink dots on the surface of a print medium with the aid of a dot-recording head provided with a plurality of dot-forming elements for ejecting ink droplets, wherein the dot-recording device comprises a platen configured to extend in the main scanning direction and to be disposed opposite the dot-forming elements at least along part of a main scan path, the platen being configured to support the print medium at a position opposite the dot-recording head, and being configured to have a slot extending in the main scanning direction , a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including [at least] not entirety but part of the plurality of dot-forming elements; the computer program product comprising:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program comprising:

an image data generating program for causing the computer to generate image data for an area outside the print medium beyond the edge on which the edge printing is performed.